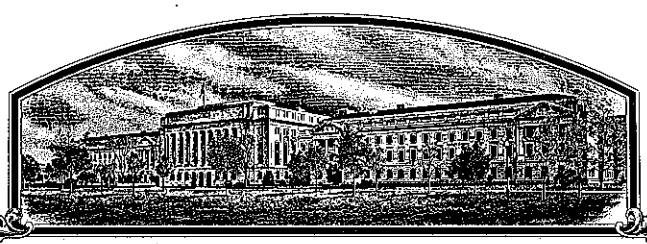


No. 9300095

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Terral Seed Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'Terra-Vig 6253'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington, D.C. *this* 29th *day of* March *in the year of our Lord one thousand nine hundred and* ninety-six.

Attest:

Marsha A. Stanto
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Dan Glickman
Secretary of Agriculture

FORM APPROVED: OMB 0581-0055, Expires 1/31/91

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
Terral ~~Norris~~ Seed Co., Inc. JBS 12 March 1996

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.
TVX-6253

3. VARIETY NAME
Terra-Vig 6253

4. ADDRESS *(street and no. or R.F.D. no., city, state, and ZIP)*
604 Ninth Street
Lake Providence, LA 71254

5. PHONE *(Include area code)*
(318) 559-2840

FOR OFFICIAL USE ONLY

PVPO NUMBER 9300095

FILING
Date: January 19, 1993
Time: ☐ A.M. ☐ P.M.

FEES RECEIVED
Filing and Examination Fee: $ 2150.00
Date: Jan. 19, 1993
Certificate Fee: $ 300.00
Date: 2-21-96

6. GENUS AND SPECIES NAME
Glycine max.

7. FAMILY NAME *(Botanical)*
Leguminosae

8. CROP KIND NAME *(Common Name)*
Soybean

9. DATE OF DETERMINATION
1986

10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION *(Corporation, partnership, association, etc.)*
Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
Louisiana

12. DATE OF INCORPORATION
1953

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
Thomas F. Terral
P. O. Box 826
Lake Providence, LA 71254

PHONE *(Include area code)*: (318) 559-2840

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow INSTRUCTIONS on reverse)*

a. ☒ Exhibit A, Origin and Breeding History of the Variety
b. ☒ Exhibit B, Novelty Statement
c. ☒ Exhibit C, Objective Description of Variety
d. ☒ Exhibit D, Additional Description of Variety
e ☒ Exhibit E, Statement of the Basis of Applicant's Ownership
f ☒ Seed Sample (2,500 viable untreated seeds) Date Seed Sample mailed to Plant Variety Protection Office 1/13/93
g ☒ Filing and Examination Fee ($2,150) made payable to "Treasurer of the United States"

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See section 83(a) of the Plant Variety Protection Act.)*
☐ YES *(If "YES," answer items 16 and 17 below)* ☒ NO *(If "NO," skip to item 18 below)*

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☐ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
☐ YES *(If "YES," through)* ☐ Plant Variety Protection Act ☐ Patent Act Give date _____)
☒ NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☐ YES (If "YES," give names of countries and dates)
☒ NO

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *(Owner(s))*	CAPACITY OR TITLE	DATE
Thomas F. Terral	Pres.	1-12-93
SIGNATURE OF APPLICANT *(Owner(s))*	CAPACITY OR TITLE	DATE

9300095

EXHIBIT A

Terral-Norris Seed Co., Inc.

Application for Plant Variety Protection — Terra-Vig 6253

ORIGIN AND BREEDING HISTORY:

1981 - Single crosses made:
- Richland, IN S76-2109/Coker 355
- Hartsville, SC Co80-764/D77-5090

S76-2109 was later released under name "Pershing",Co80-764 under the name "Coker 485" and D77-5090 under the name "Epps".

1982 - F1's field grown at Hartsville, SC and intercrossed:
Pershing / Coker 355 // Coker 485 / Epps

1983 - F_1 field grown at Clarkedale, AR and advanced to F_2.

1983-84 - F_2 & F_3 advanced, in the greenhouse during the winter, utilizing modified single seed descent (SSD).

1984 - F_4 field grown at Clarkedale, AR as rows #141-160 and single plants selected at harvest.

1984-85 - F_5 progeny screened with SCN Race 14 in the greenhouse at Bay, AR during the winter.

1985 - F_5 progeny SCN resistant rows were increased in the field at Bay, AR. One row #14,767 was selected, harvested in bulk and designated as Co86-1083.

1986 - Preliminary Trial - 143 Group V 1 Location
In 1986, Co86-1083 was determined to be stable and breeding true for important characteristics and further testing for yield and disease resistance was done.

1987 - Second Year Trial - 210 Group VI 4 Locations

1988 - Third Year Trial - 314 Group V 6 Locations

1989 - Advanced Trial - 454 Group VI 9 Locations

1990 - Advanced Trial - 453 Group VI 9 Locations

1991 - Advanced Trial - 360 Group VI 8 Locations

1992 - Spring: Transferred to Terral-Norris Seed Company as X9163 which was changed to TVX 6253.

EXHIBIT B

NOVELTY STATEMENT:

To our knowledge, Terra-Vig 6253 most resembles Coker 485, S61-89, and Coker 355. Differences include, but are not necessarily restricted to, the following:

1. Terra-Vig 6253 is resistant to SCN Races 1,3,4,9 and 14 where Coker 485 is moderate resistant to race 4 ,moderately susceptible to race 9 and moderately susceptible to race 14

2. Terra-Vig 6253 is resistant to the Southern Root Knot Nematode where Coker 355 is susceptible.

3 Terra-Vig 6253 is susceptible to SCN Race 5 where Northrup King S61-89 according to the Breeder is moderate resistant.

4. Terra-Vig 6253 is susceptible to frogeye where Northrup King S61-89 is resistant.

5. Terra-Vig 6253 is intermediate in its reaction to the herbicide Metribuzin where Coker 355, Coker 485 and Northrup King S61-89 are all tolerant to the herbicide.

6. Terra-Vig 6253 is moderate in its reaction to Races 1 and 7 of Phytophthora Root Rot where Northrup King company data suggest S61-89 is susceptible but field tolerant to the disease. Coker 485 is rated as susceptible to race 1, moderate to race 7 yet field company data suggest it is field tolerant to Phytophthora Root Rot.

7. Terra-Vig 6253 has moderate resistance to Stem Canker where Coker 355 is moderate susceptible.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (Glycine max L.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Terral Norris Seed Co., Inc.	TVX 6253	Terra-Vig 6253

ADDRESS *(Street and No., or R.F.D. No., City, State, and Zip Code)*

604 Ninth Street
Lake Providence, LA 71254

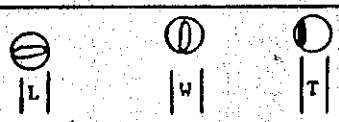
FOR OFFICIAL USE ONLY

PVPO NUMBER 9300095

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g., [0][9]). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:

[2]



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ **2. SEED COAT COLOR: (Mature Seed)**

[1] 1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other *(Specify)* _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

[2] 1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ **4. SEED SIZE: (Mature Seed)**

[1][3] Grams per 100 seeds

★ **5. HILUM COLOR: (Mature Seed)**

[6] 1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other *(Specify)* _____

★ **6. COTYLEDON COLOR: (Mature Seed)**

[1] 1 = Yellow 2 = Green

★ **7. SEED PROTEIN PEROXIDASE ACTIVITY:**

[3] 1 = Low 2 = High 3 = Segregating

★ **8. SEED PROTEIN ELECTROPHORETIC BAND:**

[ ] 1 = Type A ($SP1^a$) 2 = Type B ($SP1^b$)

★ **9. HYPOCOTYL COLOR:**

[4] 1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

★ **10. LEAFLET SHAPE:**

[3] 1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other *(Specify)* _____

11. LEAFLET SIZE:

[2] 1 = Small ('Amsoy 71'; 'A5312') 2 = Medium ('Corsoy 79'; 'Gasoy 17') 3 = Large ('Crawford'; 'Tracy')

12. LEAF COLOR:

[3] 1 = Light Green ('Weber'; 'York') 2 = Medium Green ('Corsoy 79'; 'Braxton') 3 = Dark Green ('Gnome'; 'Tracy')

★ **13. FLOWER COLOR:**

[2] 1 = White 2 = Purple 3 = White with purple throat

★ **14. POD COLOR:**

[1] 1 = Tan 2 = Brown 3 = Black

★ **15. PLANT PUBESCENCE COLOR:**

[2] 1 = Gray 2 = Brown (Tawny)

16. PLANT TYPES:

[2] 1 = Slender ('Essex'; 'Amsoy 71') 2 = Intermediate ('Amcor'; 'Braxton') 3 = Bushy ('Gnome'; 'Govan')

★ **17. PLANT HABIT:**

[1] 1 = Determinate ('Gnome'; 'Braxton') 2 = Semi-Determinate ('Will') 3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

★ **18. MATURITY GROUP:**

[0][9] 1 = 000 2 = 00 3 = 0 4 = I 5 = II 6 = III 7 = IV 8 = V 9 = VI 10 = VII 11 = VIII 12 = IX 13 = X

★ **19. DISEASE REACTION:** (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

BACTERIAL DISEASES:

★ [2] Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)

★ [0] Bacterial Blight (*Pseudomonas glycinea*)

★ [2] Wildfire (*Pseudomonas tabaci*)

FUNGAL DISEASES:

★ [0] Brown Spot (*Septoria glycines*)

Frogeye Leaf Spot (*Cercospora sojina*)

★ [0] Race 1 [0] Race 2 [0] Race 3 [0] Race 4 [0] Race 5 [1] Other (*Specify*) to Races in the Mid-South Area.

[0] Target Spot (*Corynespora cassiicola*)

[0] Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)

[0] Powdery Mildew (*Microsphaera diffusa*)

★ [0] Brown Stem Rot (*Cephalosporium gregatum*)

[3] Stem Canker (*Diaporthe phaseolorum* var. *caulivora*) 3 - moderate resistance

5

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued) 3 – Moderate

FUNGAL DISEASES: (Continued)

★ [0] Pod and Stem Blight *(Diaporthe phaseolorum* var; *sojae)*

[0] Purple Seed Stain *(Cercospora kikuchii)*

[0] Rhizoctonia Root Rot *(Rhizoctonia solani)*

Phytophthora Rot *(Phytophthora megasperma* var. *sojae)*

★ [3] Race 1 [0] Race 2 [0] Race 3 [0] Race 4 [0] Race 5 [0] Race 6 [3] Race 7

[0] Race 8 [0] Race 9 [ ] Other *(Specify)* _____

VIRAL DISEASES:

[0] Bud Blight (Tobacco Ringspot Virus)

[0] Yellow Mosaic (Bean Yellow Mosaic Virus)

★ [0] Cowpea Mosaic (Cowpea Chlorotic Virus)

[0] Pod Mottle (Bean Pod Mottle Virus)

★ [0] Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode *(Heterodera glycines)*

★ [2] Race 1 [1] Race 2 [2] Race 3 [2] Race 4 [2] Other *(Specify)* Races 9 and 14

[0] Lance Nematode *(Hoplolaimus Colombus)*

★ [2] Southern Root Knot Nematode *(Meloidogyne incognita)*

★ [0] Northern Root Knot Nematode *(Meloidogyne Hapla)*

[0] Peanut Root Knot Nematode *(Meloidogyne arenaria)*

[0] Reniform Nematode *(Rotylenchulus reniformis)*

[0] OTHER DISEASE NOT ON FORM *(Specify)*: _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

★ [0] Iron Chlorosis on Calcareous Soil

[0] Other *(Specify)* _____

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[0] Mexican Bean Beetle *(Epilachna varivestis)*

[0] Potato Leaf Hopper *(Empoasca fabae)*

[0] Other *(Specify)* _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	Coker 485	Seed Coat Luster	Coker 355
Leaf Shape	S61-89	Seed Size	Coker 355
Leaf Color	Coker 485	Seed Shape	Coker 485
Leaf Size	Coker 485	Seedling Pigmentation	Coker 485

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/ POD
				CM Width	CM Length	% Protein	% Oil		
Submitted				–	–	–	–		–
Name of Similar Variety				–	–	–	–		–

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A_2 in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

EXHIBIT D

ADDITIONAL DESCRIPTION OF VARIETY:

Terra-Vig 6253 is an F_5 SCN resistant selection from the cross[Pershing X Coker 355] X [Coker 485 X Epps]. It is classified as an early Group VI, maturing 6 days later than Coker 485. It has purple flowers, tawny pubescence and tan pods. Seeds are shiny yellow with black hila. Plants are fairly tall and appear better adapted to lighter soils than heavier soils.

Terra-Vig 6253 is resistant to SCN races 1,3,4,9 and 14 and to Southern Root Knot Nematode. It has moderate resistance to races 1 and 7 of Phytophthora Root Rot and Stem Canker. An intermediate reaction to the herbicide Metribuzin. Terra-Vig 6253 is susceptible to all frogeye races common in the Mid-South and to SCN race 2 and 5.

9300095

EXHIBIT E

TERRAL-NORRIS SEED COMPANY'S APPLICATION FOR 'TERRA-VIG 6253'

STATEMENT OF APPLICANT'S OWNERSHIP

JLS 12 March 1996

Although Terral ~~Norris~~ Seed Company did not develop 'Terra-Vig 6253' soybean, the original breeder would have been eligible to apply and receive protection. Terral-~~Norris~~ Seed Company is therefore eligible to apply and receive protection on 'Terra-Vig 6253 through purchase of this variety from the original breeder.

JLS 12 March 1996

9300095

June 26, 1995

Mr. Tom F. Terral
Terral-Norris Seed Co., Inc.
P.O. Box 826
Lake Providence, LA 71254

Dear Tom:

Subject: Basis of ownership of the following soybean varieties: Terra-Vig 6792 (X9171) soybean, Terra-Vig 6253 (X9163) soybean, Terral TV X 6565 (X9263) soybean, Terral TV X 4990 (X9352) Soybean.

The original breeder on the above varieties is Dr. Howard Gabe of our Bay, Arkansas Research Station.

Northrup King affirms that all of the varieties are proprietary and were the exclusive property of Northrup King and Northrup King would have been eligible to apply for PVP for the above varieties had it desired to do so.

Northrup King has assigned to Terral-Norris free from all encumbrances, all rights of Northrup King to varieties including all rights of Northrup King under any Plant Variety Protection Certificate as is or may be applied for and/or obtained in the United States of America on such varieties.

Sincerely,

Marion Hawkins

Marion Hawkins

MH/dss

Alan A. Atchley

NORTHRUP KING CO. • 639 WEST CAROLINA AVENUE • HARTSVILLE, SC 29550 • PHONE (803) 332-8151 or (800) 476-1318
P.O. BOX 340 • HARTSVILLE, SC 29550 • FAX (803) 383-4085

10